

# PAPER SCULPTURE

WHAT IS IT?

Prepared by  
B. Rensenhouse  
WMU Art

1. Using paper so that it is no longer flat
2. Paper cut, scored, folded, and put together to produce roundness, 3rd dimension
3. Begun when a flat piece of paper is slit and overlapped, curved, or folded to create more than a single plane—to give depth by effects of light and shadow..
4. An art activity to simulate imagination and ingenuity with many opportunities for experimentation with minimum of supplies, expense, and mess!

## MATERIALS:

1. Scissors (regular, extra long blade type, pinking shears, small models, etc.)
2. Paste (rubber cement or Tri-Tex Cream glue)
3. Papers (construction paper is suitable for school use, also light weight cardboards, tagboards, fadeless papers, obtain scraps from print shops )
4. You may also want to use a variety of staplers—plier type, gun type, long neck models, tacking types, small "tot" or pocket models.... X-Acto knives, pins, tapes, paper fasteners or brads, compass, metal edge ruler, paper punch, wire, blunt object for scoring, paper "welders", thread, clips for holding...

## SOME BASIC TECHNIQUES

1. Scoring—pressing or indenting half way through paper and pinching back on the opposite side. Done with scissors, spoon handle, dull knife, paper clip, beveled wood form, crochet hook, knitting needle, etc. Makes it possible to crease paper on a curve and makes a neater straight fold..
2. Curling—done by pulling paper against thumb and scissor—or rolling paper over a pencil or round object for angle "curls", tight, loose, "pageboy "
3. Cutting—to expand paper with continuous cuts, related cuts for mesh, lantern cut
4. Folding—for "catsteps"; fans, geometric solids, origami forms
5. Rolling—for cylinders, also curving and waving of forms
6. Weaving—also braiding of paper
7. Surface treatment—use of X-acto knives to raise paper, not for small children
8. Laminating—glue or adhering solutions are put between 5-6 layers of papers, can work over balloon forms, or pin form to dry on wax paper

## BASIC SHAPES

1. Cylinder or tube—full-round or half round forms
2. Cone —made from a circle or segment or a circle radius determines height of cone
3. Pyramid—made from semi-circle or quarter of circle folded in quarters



Or made from square with diagonal folds, one cut to middle, overlap



SOME USES: posters, decorations, masks, stage sets, props for TV settings, puppets, murals, dioramas, show case displays, bulletin boards, hall displays, mobiles, relief maps, table top displays, advertising and graphic arts, greeting cards, costumes, hats and headgear, lettering, centerpieces, seasonal topics, etc. **NOTE:** paper sculpture projects are usually of a temporary rather than permanent nature, due to paper fading, difficult in storing, and delicacy of some techniques. Some of the paper techniques can be incorporated into cardboard forms for more permanency.

## SOME REFERENCES

comprehensive coverage in Creating With Paper by Pauline Johnson and New Dimensions in Paper Craft by Yamada and Ito.



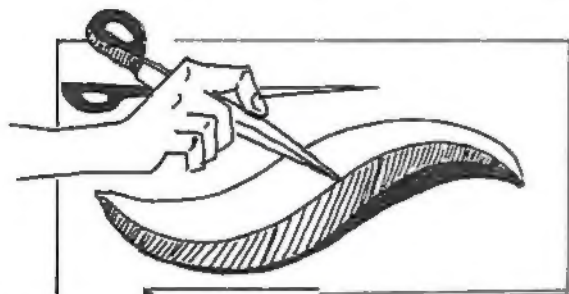
# SCORING PAPER

TO GIVE IT A DIMENSIONAL EFFECT...  
AND CREATE INTERESTING SHADOW AREAS...

Scoring paper is indenting or incising lines into paper. These lines are then pinched to push the paper into dimension. Scoring paper makes it possible to bend or crease paper along a curved line. Scoring can also be used for straight lines to put neat folds into paper, but it is more often used as the ONLY WAY TO MAKE PAPER BEND ON A CURVED LINE! Scoring can be used on both paper and cardboard with these differences:

- **TO SCORE PAPER:** such as school colored construction papers, drawing papers, water color papers, bond papers, paper scraps from print shops, etc...

Indent a firm definite line about half way into the paper with a tool such as a scissor point, dull kitchen knife, paper clip, knitting needle, crochet hook, nail file, bamboo spatula, or other similar tool that will go into the paper without tearing it or cutting it. Hold your tool like a pencil.



Score on one side and pinch along scored line on the opposite side of the paper. Be sure to pinch gently and follow the contours of the scored lines. Cutting a slit and overlapping may pull your scored edge into a deeper shape.

Work on a flat, smooth surface to achieve even consistent scored lines (try magazines, cardboard, masonite, formica, plastic, etc.)

- **TO SCORE CARDBOARD:** (such as mat board, corrugated box board, bristol board, tagboard, chipboard, railroad board, index paper, poster board, metallic boards..)

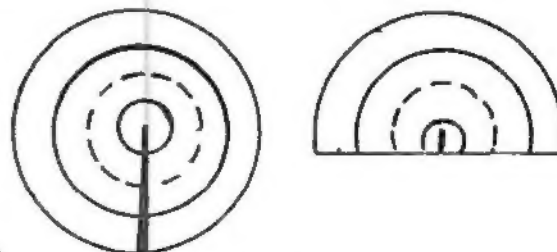
Cut a definite line about half way into the board with a tool such as an X knife, single edge razor blade, craft knife, mat knife, etc. Be sure knife is sharp. Practice your pressure so knife does not cut way through the board. Pinch along scored line on the same side as you scored it.

- **FOR CONSECUTIVE SCORING:** Be sure to alternate sides as you score. Score on one side, flip over and score on the other.

- **TO SCORE A CIRCLE WITH CONCENTRIC CIRCLES:** (Use compass or draw around a round shape)

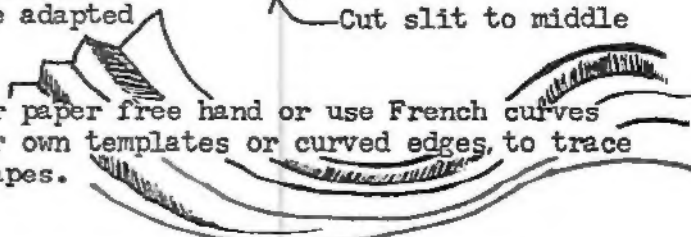
SCORE IT, SLIT IT, PINCH IT, AND PASTE IT:  
On diagram at right, solid lines are scored on top side of paper, and dotted lines are scored on back side of paper (reverse it)

Cut a slit or small wedge to the middle of the circle before you try to pinch the scored lines into shapes. After scoring, overlap paper at the slit and paste. This can also be adapted for scoring a half circle.

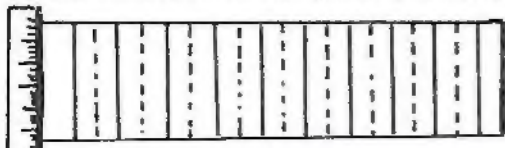


← Cut slit to middle

- **TO SCORE GRACEFUL CURVES...** sketch them on your paper free hand or use French curves from mechanical drawing set or make your own templates or curved edges, to trace around. Use metal, plastic, or wood shapes.



- **TO SCORE FOLDS WITH STRAIGHT LINES...** use metal edge ruler and score on alternate sides..



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# PROPERTIES OF PAPER

YOU CAN

SLOT CUT BURST ROLL BEND TWIST CURL SOAK

DISSOLVE SCORE TAB DYE Krimp

LAMINATE PRINT EMBOSS SHRED COAT MASH

PUNCH SPRAY STRIP GLUE SLIT SWITCH STAPLE BIND

TAPE TIE WRAP CLIP MOLD

CRUMPLE WEAVE FRINGE BRAID FOLD TEAR FLAP

Prepared by  
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These suggestions for paper uses were taken from the exhibit "MADE WITH PAPER" sponsored by the Container Corporation of America and the Museum of Contemporary Crafts in New York (This is now known as the American Craft Museum on W. 53rd St.)

It all helps to show the vast VERSATILITY of PAPER AND PAPER PRODUCTS.

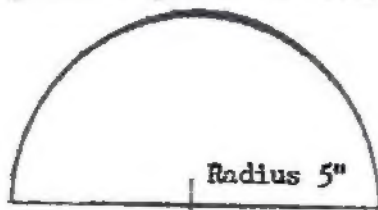


# TO HELP YOU DETERMINE THE HEIGHTS OF CONES AND PYRAMIDS IN PAPER SCULPTURE...

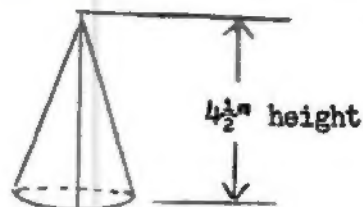
A paper cone is formed from a basic circle shape and the half circle is most often used for this. By using the table below, you can get an approximate idea of the height of a cone by checking the length of the radius of the half-circle. Use compass.

for example:

If your radius is 5"....



The height of your cone will be about  $4\frac{1}{2}$ "



These are approximate and do not allow for overlap. Other dimensions are listed below:

If your radius is:

2 inches  
 $2\frac{1}{2}$  inches  
 3 inches  
 $3\frac{1}{2}$  inches  
 4 inches  
 $4\frac{1}{2}$  inches  
 5 inches  
 6 inches  
 7 inches  
 $7\frac{1}{2}$  inches  
 8 inches  
 $8\frac{1}{2}$  inches

Your cone height will be about:

$1\frac{3}{4}$  inches  
 $2\frac{1}{4}$  inches  
 $2\frac{3}{4}$  inches  
 $3\frac{1}{4}$  inches  
 $3\frac{1}{2}$  inches  
 4 inches  
 $4\frac{1}{2}$  inches  
 5 inches  
 6 inches  
 $6\frac{1}{2}$  inches  
 under 7 inches  
 $7\frac{1}{2}$  inches

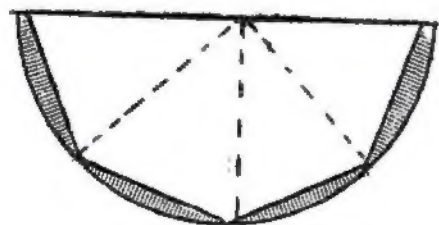
To fasten cone to a surface, cut tabs in your semi-circle curved edge. Cut hole in surface for the "hidden tab" principle



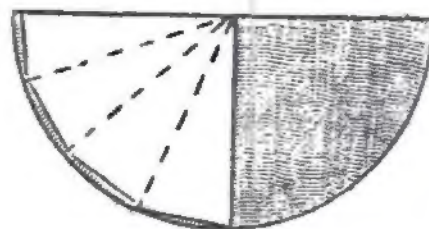
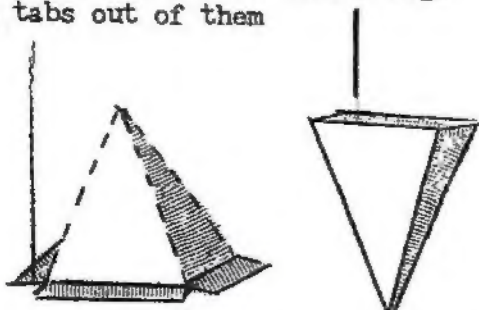
The same principle above can be applied to figuring the height of a pyramid when you use the circle form and score creases into it.

ONE-HALF CIRCLE for a pyramid...

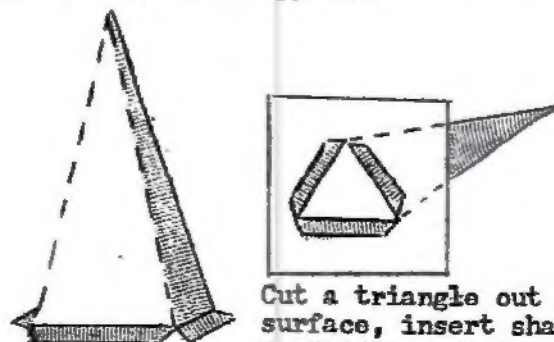
ONE-QUARTER OF A CIRCLE for a pyramid...



Score and crease on the dotted lines, overlap segment #1 on to segment #4 and paste or staple. Trim off shaded areas of circle edge or make tabs out of them



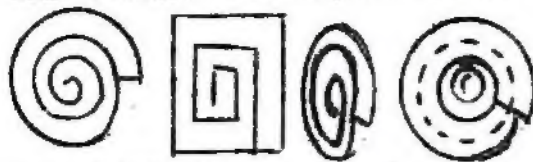
Using only a quarter of a circle will make a more narrow type of cone or pyramid..score on the dotted lines to make a tall, narrow pyramid



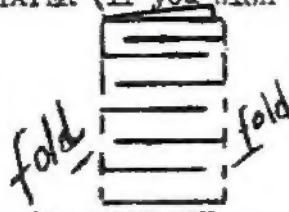
Cut a triangle out of surface, insert shape for "hidden tabs"

TRY SOME OF THESE BASIC PAPER TECHNIQUES. (see also bulletin board in class for more)

THE "CUTTING" TECHNIQUE TO EXPAND PAPER (if you wish to count "cutting" as 1 technique)



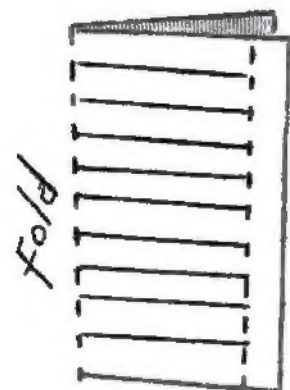
CONTINUOUS CUT in spiral or rectangle, oval, square, etc... can also be scored for shadows effects...



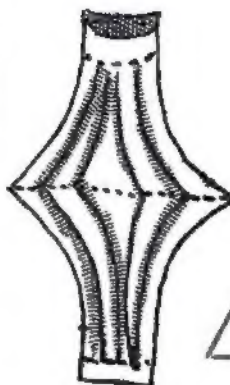
the MESH CUT or RELATED CUT



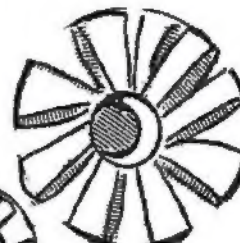
Pull gently apart to expand the mesh..tissue paper or other light weight paper works well for this type expanding



THE LANTERN CUT... fold paper once and cut in from fold to a "stopping" folded line



Roll into CYLINDER for the lantern shape



OR do a WREATH OR FLOWER from the same basic lantern cut. Fold flaps inside and roll into a "flower" or "wreath form"..vary strips in width and length for different appearance in the finished form... Be sure you touch fold each time with scissors or paper will not roll into form readily...

TRY SOME EASY PAPER FOLDING FORMS... Crease all folds very firmly with scissor or your finger nail..start with a square for each of below

#### "COOTIE CATCHER" or FORTUNE TELLER

1. Start with a square
2. Fold 2 regular folds
3. Fold 2 diagonal folds
4. Fold corner to middle and leave it there (do on all 4 corners)
5. Turn over and fold all corners to middle a second time around
6. Find the side with 4 squares, re-bend it
7. Place thumb and 3 fingers behind the squares and pinch together



(this can be a simple puppet, basket, tree, by piling and other uses)

#### Try a MANY SIDED POLYHEDRON...

see 2nd page of your green sheet on "stars and snowflakes"..see also booklet on your reading list PHOLD IT for tips on forming more geometric solid forms...

Prepared by B. Rensenhouse, WNU Art Dept.

#### GERMAN BELL OR "JEWEL" or a "BEAK"

1. Start with a square
2. Fold 2 regular folds
3. Fold 2 diagonal folds
4. Mark an X in one corner to indicate where you started
5. Fold left side of corner to the diagonal, the fold right side of corner to the diagonal to make a "kite" fold, Unfold them as you continue doing this to each corner around the square
6. You should see 4 star points..one on each corner and 2 chopped off points in middle of each side
7. Pinch inward in middle of each side to form a "tray"
8. Pull up corners to form a "bell" ..can also be turned inside out for a mask effect...





## SOME POSSIBLE THEME IDEAS FOR PAPER SCULPTURE PROJECTS

Below are some theme ideas that have been used in art education classes to decorate our hall area and our classroom. Other themes have been suggested by students as some possible ideas for classroom projects for children (add your ideas to this list)

### ANIMALS.....

"If I Ran the Zoo" (fantastic and imaginative)  
"Witches Pets" (used at Halloween) cheery type monsters  
"Sorcerer's Pets and Apprentices" (Castle characters with Cecil the Sorcerer)  
Farm Animals, garden creatures  
Prehistoric animals  
a Pet Shop  
Jungle Creatures and tropical types  
Mythical creatures (unicorns, dragons, etc)  
Forest creatures (prevent forest fire themes)

BIRDS (tropical exotic types, bird feeder theme)

INSECTS AND BUGS (see shee on "buggy ideas")

CIRCUS AND CLOWN THEMES

TOTEM POLES (box sculpture types)

GARDEN CREATURES, plants, flowers

OUTER SPACE INHABITANTS, Martian types

FAMOUS HISTORICAL CHARACTERS

STORY BOOK CHARACTERS from children's literature, folk tales, fairy tales, legends, characters for a Book Fair, "Alice in Wonderland" theme

SPORTS FIGURES

PEOPLE OF OTHER LANDS (costumes)

COSTUMES, MASKS, HEADGEAR for children's plays

FANTASY FACTORY (machine forms and parts)

TRANSPORTATION IDEAS (boats, trains, cars, etc.)

BOX SCULPTURE OF ALL KINDS

POSTERS, BULLETIN BOARDS, DECORATIVE SIGNS for school units and activities

ECOLOGY THEMES, POLLUTION PREVENTERS

SEA CREATURES, UNDERWATER WORLD, POND LIFE

HOLIDAY THEMES at appropriate times

ROBOTS, COMPUTERIZED CHARACTERS

PAPER PUPPETS for quick plays

KNIGHTHOOD AND CHIVALRY, heraldry, coat of arms

"ROOM REMINDERS" characters and creatures..TEACHING AIDS, FRIENDLY MASCOTS that aid in your units, teaching routines, reminders, announcements, motivators, "containers".. to sit, hang, or pin against board

on a reading table  
in a science area  
nature study  
an "awareness area"  
for clean up routines (litter bug, etc)  
ecology and pollution reminders  
sit on library shelves  
sit on a piano in your classroom  
as aids in good sportsmanship  
to call attention to art and artists

DREAM CREATURES, mind fantasies

STUDENT "TYPES" Portraits of classmates

MURALS, 3-d scenes, dioramas

SAFETY THEMES

GOOD HEALTH HABIT themes

BOOK FAIRS, other money raising projects

TREES, PLANT LIFE, nature ideas

theme on "Where the Wild Things Are"  
(and other ideas taken from children's books and literature)

DECORATIVE KITES, flying forms

HOT AIR BALLOONS (woven basket gondolas)

FANTASY FLOWERS in giant forms

HANGING ORNAMENTS for FESTIVE OCCASIONS

## SOLE TIPS ON IMPROVING YOUR WORKMANSHIP IN PAPER SCULPTURE TECHNIQUES....

### 1. USE SHARP TOOLS

...use sharp scissors for cutting paper. Use sharp x-acto knives when scoring cardboard and doing the surface treatment technique.

### 2. SCORE with even pressure and clean-cut stroke, pinch back gently (when doing scored circles, be sure to cut a slit to the middle of the circle)

### 3. HIDE "JOINTS" or places where you have joined pieces of paper..especially hide staples unless they are part of the design...cover taped areas unless it's part of the design also...

### 4. AVOID SCOTCH TAPE for permanent joining, as it often falls with weather changes... some other types of tapes are suitable and more permanent for paper sculpture.. (check out some "transfer tapes", double face tapes)...test out tapes before using..some tapes pull off the surface of paper and of walls!

### 5. USE GLUES that will rub off easily if overused--such as Tritex cream glue, rubber cement. Most white caesin based glues do not rub off well on paper..

### 6. WHEN MAKING PAPER FOLDED FORMS (such as German Bell, polyhedron) crease the paper very firmly with scissors or finger nail

### 7. MAKE SURE THAT NO INK, PENCIL, OR CHALK MARKS ETC. show off on the finished product..these may have been used in planning or sketching but crease or turn paper over on the finished work.

### 8. HIDE UNSIGHTLY parts of your armature (such as sacks, wire, wood, etc.) unless it is important to see as part of the overall effect

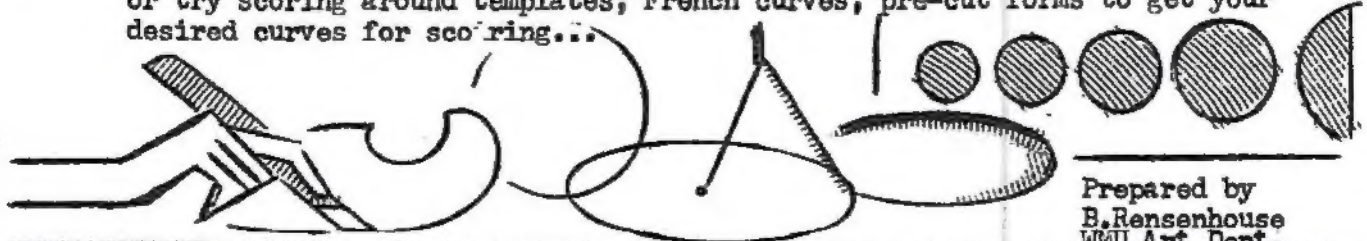
### 9. SECURE ALL PARTS OF THE SCULPTURE together well..this is especially important if sculpture is to be moved or if it is located in a drafty hallway...taped pieces often fall off in these circumstances..try securing with wires, glues, and paper fasteners...

### 10. KEEP HANDS CLEAN and the work area clean, as paper stains and soils very easily

### 11. KEEP YOUR SCULPTURE in character..even though workmanship is precise and beautifully crafted, your sculptures can still have a free casual, and carefree look if it fits the character of your subject matter...

### 12. SELECT carefully the types of armatures, papers, and cardboards that will work well for your subject..support the paper when it needs it or it may droop...

### 13. USE AIDS IF NECESSARY for more perfect curves and circles...try using compasses or try scoring around templates, French curves, pre-cut forms to get your desired curves for scoring...



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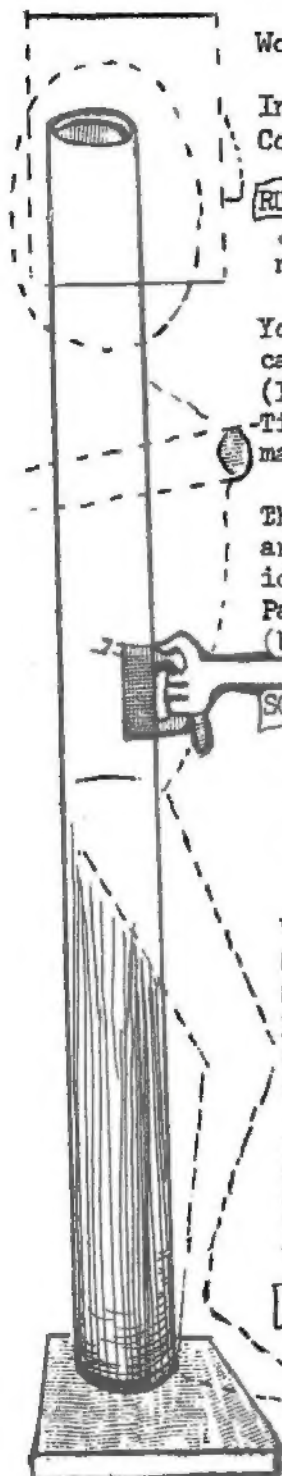
**SPECIAL NOTE:** ANY works done in paper sculpture are usually of a temporary nature as paper fades and does not hold up well for a great length of time. Photographing the work while it is fresh is a good way to "preserve" it. But paper sculpture forms can also be put away carefully in closed containers and re-used by adding some fresh paper later. Keep light away from your work unless you are using fadeless papers.



# FROM POLES TO PEOPLE

....TO DECORATE OUR HALLS FOR HALLOWEEN and demonstrate your paper sculpture techniques

DESIGN A PAPER SCULPTURE HALLOWEEN CHARACTER OR FIGURE OVER A RUG TUBE



Work with a partner of your choice (2 or 3 people per pole)

Incorporate at least 3 PAPER SCULPTURE TECHNIQUES, one must be SCORING  
Combine any new or old art techniques appropriate to your idea

RUG TUBES will be furnished...these may be painted, colored, covered,  
...any appropriate armature may be built around the pole—use hammer and  
nail, use staple gun, masking tape, drill holes, wrap wire, stuff forms etc.

You may combine any kinds of papers, tagboards, corrugated board,  
cardboards, wire, boxes, spherical forms, to construct the figure.  
(large 24 x 36 colored construction paper may be purchased at Labadies)  
Tissue and crepe papers can be draped fairly easily. Make sure your  
materials are durable and are held together well for about 1½-2 weeks.

The head of the character may be a "mask" idea that can be lifted off  
and worn later if desired. Use any spherical form idea or other base  
idea..You may use paper mache if you plan ahead for the drying time.  
Pariscraft, a fast drying plaster bandage, may be purchased in our room.  
(but it will add weight to the form)

SOME POSSIBLE FIGURE IDEAS .. (can be adapted to other seasons or themes)

Hopefully we will have a good variety of characters to decorate the  
hall. "Scary" figures are acceptable but please avoid gory, gruesome  
types. A more humorous, appealing, "lovable monster" type is more  
appropriate is more appropriate for an elementary school situation.  
Concentrate of the front of the figure—back may be against wall.

witches	sorcerers	scarecrows	dragon-types
goblins	devilish types	cats	paper sculpt.
ghosts	masked children	bats	artists
pumpkin people	monsters	owls, vultures	villain types
skeletons	vampires	pumpkin carvers	headless -
spiders, webs	ghouls	window painters	horseman

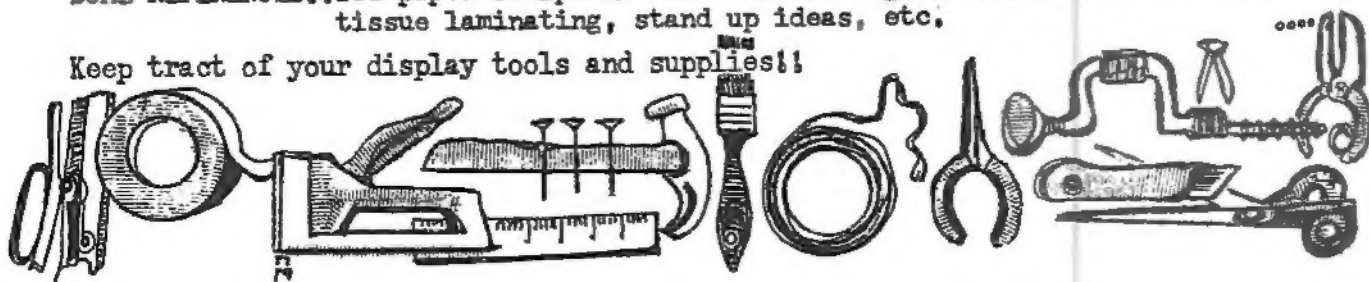
If you want to encourage constructive "causes", go ahead: such as  
TRICK OR TREAT FOR UNICEF

Ecology, Energy, Halloween safety, Design your own costume, mask, etc  
Artistic window painting with Halloween themes

FIGURES EVALUATED: Idea and Concept and Imagination  
Workmanship and techniques  
Resourceful use of paper sculpture techniques  
and choice of appropriate materials for theme  
Overall carrying power and impact

SOME REFERENCES..see paper sculpture books on reading list, mimeo sheets on masks,  
tissue laminating, stand up ideas, etc.

Keep tract of your display tools and supplies!!





# TUBE TALK

BELOW ARE SOME IDEAS FOR CHRISTMAS DECORATIONS AND DISPLAYS which are all done with a basic tube (or cylinder) shape. Tubes could range in size from a toilet tissue tube to a tall rug tube. They could be rolled paper or cardboard or almost any material of a cylindrical form. Combine with paint, paper sculpture, scrap materials.

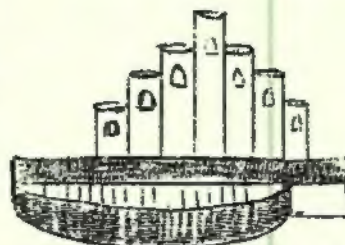
CANDY CANES (could spell words)



SNOWMAN



PIPE ORGAN (use various heights of tubes)



HARPS, ANGEL TRUMPETS



Combine with stick and string

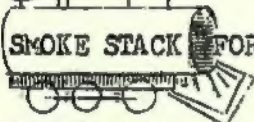
CAROLERS (use another size tube for lamp posts)



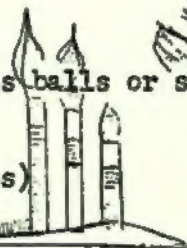
CHRISTMAS TREE IDEAS



SMOKE STACK FOR SANTA'S TOY TRAIN



ANGELS and other Christmas figures (use Christmas balls or styrofoam for heads)



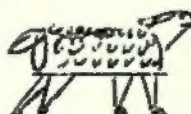
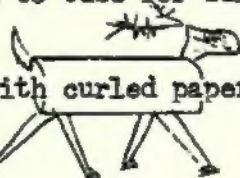
CANDLES (rug tubes make effective large tall ones)



SANTA CLAUS (tube head, bodies, boots, can use a stuffed body or framework built on to tube for bulk)



REINDEER BODY, SHEEP BODY (cover with curled paper)



POSTS FOR A TOY SHOP



POSTS FOR CHRISTMAS MAILBOX



OBJECTS TO HANG ON MOBILES, TREE ORNAMENTS



CHRISTMAS DECORATIVE BIRDS



see book Creating With Paper by Pauline Johnson, U. of Wash. Press.

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## A PAPER SCULPTURE ASSIGNMENT FOR A SPRING THEME....



Design a paper sculpture project to help decorate our halls and room boards

CREATE a GARDENER's HELPER ( or assistant, advisor, garden expert, weed puller, planter, pruner, etc) who will help our paper sculpture gardener with varied gardening chores for spring. Include an imaginative flower, plant form, garden tool, or vegetable with your character.

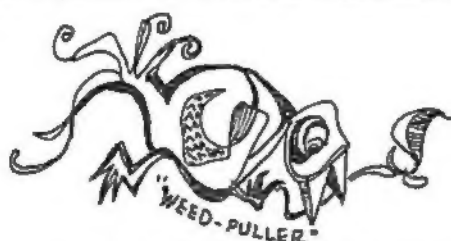
The GARDENER's HELPER is to be designed to pin on the board or put against a wall area, so the backing can be flat with "half-round" paper sculpture to give dimension. This can be a human or animal type with your personal touch to make it colorful and imaginative. Such "helpers" as birds, bugs, insect types, turtles, personified plants, flowers, or vegetables, "watch-dogs", and other appropriate personalities that look bright, cheerful, spring-like and lend themselves to dimensional forms in paper products.

**SIZE:** About 15" to 24" (or more)..you may need to design it to come apart for transport to class and then re-assemble it in class. Design it for easy storage as you may have chances to use it on your own classroom bulletin boards.

You may design this to be a cut out character with a sturdy backing such as cardboard, railroad board, heavy stencil paper available in class...or mount your form on a piece of heavier boxboard to form a "background."



to get your  
"helper" started....



Refer to some ideas used to start your crayon creature project such as free form doodles, symmetrical forms, "take a walk" with a line, etc...or start with an armature and add paper techniques...or create paper sculpture forms and join them together ...

### TECHNIQUES:

Use at least 3 of the following paper sculpture techniques for this assignment (see board in art room for variations of below)

SCORING (required of all students,  
to bend paper on a curve)

CURLING

FOLDING

CUTTING (to expand paper

LAMINATING (into a sculpture form  
over balloon, or "pinned" curved forms

WEAVING

SURFACE TREATMENT

ROLLING (cylinder or  
half-round form)

CONE SHAPE (or half-  
round one)

PYRAMID SHAPE

### PAPERS:

Construction papers will fade often..try other types , too, such as tissues, dippity papers, print unit papers, all kinds of cardboards which can be laminated or painted, wrapping papers, decorative sacks, art room scrap papers, newspapers,...

SOME ARMATURE OR FRAMEWORK IDEAS (for shape and stability) ..cardboards, cardboard strips, boxes of varied sizes and shapes, stuffed forms, half-spherical forms of mache, styrofoam balls, stiffened string, plaster bandage, cardboard cylinders, wire forms, branches, etc.....

Prepared by B. Rensenhouse, Art Dept.



## A PAPER SCULPTURE ASSIGNMENT FOR EASTER AND SPRING...

Design a paper sculpture project to help decorate our hall and room for Easter... Create: AN EASTER RABBIT'S HELPER, ASSISTANT, DESIGNER, APPRENTICE, OR ADVISOR who will assist him in designing Easter Eggs for a large egg tree. Include a PAPER EASTER EGG (or a dimensional type egg with your "helper" which may be attached to the helper or separate.) Use your "dippity dyed" paper if you wish or any other color technique that would add to the egg design (see room displays for some suggestions)

The rabbit's helper may be designed to pin on to a board or taped to the wall, so the backing can be flat with "half-round" paper sculpture to give dimension..or project may be "full round" and constructed over a armature. Theme can be a human or animal type with your personal touch to make it unusual....rabbits, ducks, lambs, chickens, birds, bugs, insects, turtles, "artists", kite flyers, butterfly collectors, or other appropriate personalities that look bright, cheerful, and spring-like. Dress them in fanciful costumes if it fits the personality. Consider having them hold a "prop" for creating the eggs, such as a paint brush, crayon, scissors, glue, tissue paper, paint jars, etc...

**SIZE:** About 15", up to 24"...you may as to design it to come apart for transport to class, and then re-assemble it. Plan to design it for easy storage..hopefully you can use it later in your own classroom.

**to GET STARTED:** Try some free form doodles, symmetrical forms, ..or start with an armature and add paper techniques.. or create paper sculpture forms and put them together for ideas

**TECHNIQUES:** Use at least 3 of the following paper sculpture techniques for your "helper" (see board in art room for variations)



SCORING (required for all)

CURLING

FOLDING

CUTTING (to expand paper)

LAMINATING (into a sculptured form over balloon, or "pinned" into a curved form)

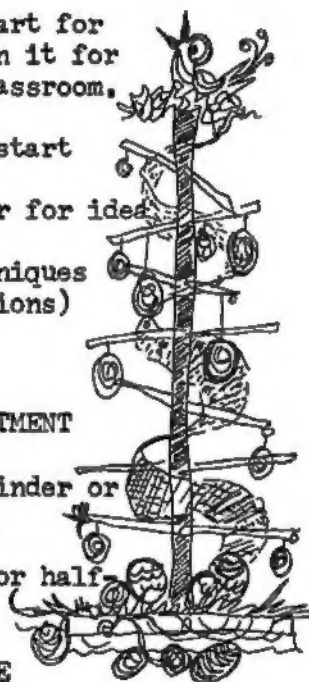
WEAVING

SURFACE TREATMENT

ROLLING (cylinder or half round)

CONE SHAPE (or half round cone)

PYRAMID SHAPE



You may combine other appropriate techniques if they work well with your paper sculpture ..crayon techniques, painting and printmaking techniques, tissue laminating, mache, cut paper, dyed papers, scrap materials, mosaic, collage, transparencies, etc...

**ARMATURE OR FRAMEWORK IDEAS:** (for shape and stability)

Flat cardboards, scored cardboards, spherical forms of mache, plaster bandage, styrofoam balls, stiffened string, boxes, cylinders, ribbon rollers, wire, L'leggs eggs, wood, branches, paper wads, stuffed sacks..combine with a variety of papers for color and contrast..

**FASTENING DEVICES:**



...such as Tri-tex cream glue, rubber cement, paper fasteners, staples...AVOID scotch tape as a permanent tape...try TABS to help you join surfaces together...try slit-slot methods...

**EVALUATION:** ..on idea and concept to fit theme, workmanship and techniques, resourceful use of paper sculpture techniques, application of good design principles, impact, appeal



# SOME WAYS TO MAKE SPHERICAL FORMS

.....for possible uses in centerpieces, decorations, ornaments, displays, hats, costumes, sculptural creations, puppets, stage props, teaching aids, mache items,.

**PAPER SCULPTURE** ...It is almost impossible to make a sphere of "ball" out of paper alone. A possible way is to criss-cross paper or cardboard strips and join at the top. Below are some better methods:

**"STUFFED" FORMS** or use of "wads"

Paper wadded into a ball can be covered with cloth, socks, tissue, crepe paper, and other flexible material to enclose the "stuffing". Stuffing could be newspaper, tissue, toilet tissue, foil, kleenex, etc. Sticks could be inserted into wad, covering taped or tied on to secure it.



**BALLOONS** of all sizes and shapes make one of the most versatile and lightweight bases for spherical forms. Cover them with below materials  $\frac{1}{2}$  balloon or whole one: You can pour water into hanging balloon for a "tear-drop" effect..

1. **PAPER MACHE**...tear pieces of newspaper so that they do not wrinkle when they are applied to balloon. Put on at least 5 layers and count the layers by alternating comics with plain newspapers. It may help to let first two layers dry before applying others but it is not absolutely necessary on smaller balloons. Hang balloon to dry at even temperature (do not hang in hot area or balloon may burst). Usual drying time is 24 hours and often more. Pop balloon when dry. White glue and water mixture is faster drying.

2. **TISSUE LAMINATING**...tissue can be applied instead of newspaper. The paste substitute could be Elmer's glue and water, liquid starch, metylan, Liquitex polymer medium. Various papers such as paper toweling, crepe paper, kleenex, rice papers, sacks, light wrapping toilet tissue, foil papers. Netting and mesh can be worked in.

3. **PLASTER BANDAGES**...one of the fastest ways to cover a balloon but it gives a much heavier effect than above methods. Dip plaster bandage strips into water and apply 1-2 layers to balloon. Dries in about 30 minutes or more..is a rough surface, can be mached, laminated, painted, or cut if necessary with sharp knife.

4. **CELASTIC**...a plastic "cloth" which becomes very hard and durable when dipped into an acetone-base activator and dried..professional material. Tear strips and dip into chemical, apply 1-2 layers. Ventilate area well, wear plastic gloves if necessary. Dries in half day or less. Surface is rough, can have smooth surface applied if desired before painting. (not recommended for el. school)

5. **STIFFENED STRING** ...for light "airy" delicate effect on spheres (see other sheet) can use mache paste, starch, glues, but polymer medium is stronger.

**MACHE LAYERS OVER CLAY, LIGHTBULBS** ...BALLS, GOURDS, DISHES, FRUITS, and other round or spherical forms. Cover form first with a "separator" such as saran, handiwrap, foil, cheesecloth, etc. so mache will not stick to form when it is removed. Cover form with 5 mache layers as told above. When layers are completely dry, cut form down sides, remove form, and seal 2 halves together with mache strips. Seal halves together soon before they warp. This is a much slower process, obviously, than popping a balloon to remove the form.

**USE AN ACTUAL BALL ITSELF.** Actual balls such as plastic balls, rubber, styrofoam, tennis, football, cork, ping pong, wooden types, plastic eggs, can be mached, laminated, carved, cut into, painted, sprayed, covered with decorative materials, fabrics..can be fast, effective.

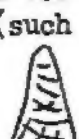


# STIFFENED STRING

...over a balloon or other forms to create airy, delicate, and unusual decorations and displays

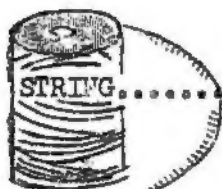
## MATERIALS NEEDED:

1. FORM to cover...balloons (avoid too cheap a variety as they break easily)  
cone s shapes (such as string holders..cover with wax paper or foil or saran wrap)



2. LUBRICANT...when using a balloon, this keeps balloon from sticking to string.. (or separator) use salad oil, popcorn oil, vaseline or similar greasy substance

3. MIXTURE for dipping strings..liquid starch or cooked starch  
(add mucilage or liquid glue for a stiffer mix !)  
..or wheat paste plus glue  
..or wheat paste, glue, and starch (heated)  
..or Liquitex Polymer Medium--the best liquid for stiffest effect



3. STRING.....keep in mind, the thinner the string, the more it tangles...  
the thicker the string, the more it needs to be saturated  
plan on a LARGE QUANTITY! a large 10-15¢ balloon takes 3 balls of 400 feet

Try using:

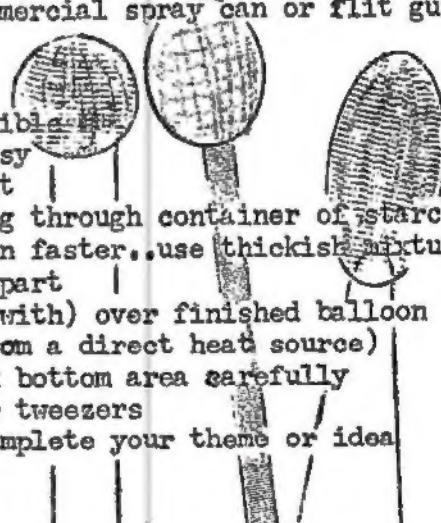
regular store string	carpet warp	thin ribbons
kite string	colored crochet	metallic strings
cords (not too thick)	cotton works well!	heavy threads
	yarns	

Some ways to color string: (but best way is to buy string already colored!)

- a. put tempera into starch mix (preferably powdered tempera)
- b. dry brush paint on to the string after string is dry
- c. spray paint on to string--commercial spray can or flit gun

## PROCEDURE for wrapping Balloon

1. Blow up balloon and tie end into 2 knots, if possible
2. Tie string to end of balloon before hands get messy
3. Grease balloon with salad oil or similar lubricant
4. Wrap balloon with the stiffened string--run string through container of starch..  
saturate string well..working in pairs is often faster..use thickish mixture
5. Wind string till strings are no farther than  $\frac{1}{4}$ " apart
6. Rub starch (or whatever solution you are working with) over finished balloon
7. Hang up balloon to dry (usually overnight away from a direct heat source)
8. Pop balloon when starch is completely dry --check bottom area carefully
9. Take the balloon "leftovers" out with scissors or tweezers
10. Add items and decorate starched string form to complete your theme or idea



## POINTERS

1. Starched string items are somewhat delicate..the less handling of them, the better (but using the Polymer medium mixture will help eliminate this problem)
2. Attach decorative items by gluing, tie-on, sewing on, wiring on, pinning  
(items could be felt, papers, sequins, glitter, fabric, wires, strings, etc)
3. Items can be placed inside spherical forms by cutting a "trap door", inserting item and sewing or tying the door shut with the same string color
4. When wrapping string, try combining various kinds and colors for decorative idea
5. Structures can be hung, or placed on some type of standard (boxes, cones, etc)

## SOME POSSIBLE USES FOR STIFFENED STRING FORMS..

Halloween ideas (cats, witches, etc.)	planets, outer space	Centerpieces
Thanksgiving turkeys	masks	Easter eggs
	mobiles, hanging items	Insects, nature